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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/656,471

09/05/2003

James Alfred Dunnam

DUQU-01

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04/21/2006

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EXAMINER

PARSLEY, DAVID J

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,471

Applicant(s)

DUNNAM ET AL.

Examiner

David J. Parsley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Detailed Action

Amendment

1. This office action is in response to applicant's amendment dated 3-1-06 and this action is final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 8, 10-14, 16, 20 and 22-26 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 1,457,337 to Barrows.

Referring to claim 1, Barrows discloses a cylindrical ballistic tracer platform – at 9 or 13 or 9a,17, for holding and carrying an integrated, inseparable tracer element – at 9-10 or 10 or 17, having a bottom – see for example figures 1-4, the tracer platform designed for use with a shotgun shell – at 1, having a bore – see the interior of 1 in figure 1, and having a shot holder – the combination of the cover at the front end of item 1 and item 8 as seen in figure 1 or the combination of the cover at the front end of item 1 and item 8, 19, as seen in figures 1 and 4, and propellant – at 5 and/or 11,12, the tracer platform to be positioned within the shotgun shell to fill

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the bore between the shot holder and the propellant – see for example figure 1, the tracer platform having a closed nose – at 20 or at 17, to be positioned proximate to the shot holder – see figures 1-4, and a bottom to be positioned proximate to the propellant – see figures 1-4, the tracer element being disposed away from the shot holder – see for example figures 1-4, the tracer element filling a coaxial cavity having a lower end at the bottom of the tracer platform – see for example figures 1-4, the bottom of the tracer platform and the bottom of the tracer element being shaped to leave a generally concave cavity which acts as a gas seal upon ignition of the propellant – see for example figures 1-4.

Referring to claims 2 and 14, Barrows discloses the tracer element comprises a cylindrical housing – at 9, containing pyrotechnic material – at 11-12, susceptible to ignition upon burning of the propellant – at 5 – see for example figures 1-4.

Referring to claims 4 and 16, Barrows discloses the tracer element is selected from the group consisting of electrical material, reflective material, chemiluminescent material and pyrotechnic material – see for example page 1 lines 64-109.

Referring to claims 8 and 20, Barrows discloses the nose of the tracer platform has a shape selected from the group consisting of flat, conical and spherical – see at 13 or 20 or 17 in figures 1-5.

Referring to claims 10 and 22, Barrows discloses the tracer platform has an outer surface with grooves – at 21, formed therein – see for example figure 5.

Referring to claims 11 and 23, Barrows discloses the tracer platform has an outer surface with symmetrically-positioned fins attached thereto – see for example at 21 in figure 5.

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Referring to claims 12 and 24, Barrows discloses the tracer platform has an outer surface with orifices formed therein – see at 21 in figure 5.

Referring to claim 13, Barrows discloses a shotgun shell with a tracer for making shot projectiles visible to a shooter comprising, a hollow shotgun shell – at 1, having a bore – see at the interior of 1 in figure 1, and having a lower end and an upper end – see for example figure 1, a base – at 2, with primer – at 4, for ignition located inside the lower end of the shotgun shell – see for example figure 1, propellant – at 5 and/or 11-12, positioned proximate to the primer – see for example figure 1, a shot holder – the combination of the cover at the front end of item 1 and item 8 as seen in figure 1 or the combination of the cover at the front end of item 1 and item 8, 19, as seen in figures 1 and 4, for holding shot pellets – at 6, located inside the upper end of the shotgun shell – see for example figure 1, a cylindrical ballistic tracer platform – at 9 or 13 or 9a,17, for holding and carrying an integrated, inseparable tracer element – at 9-10 or 10 or 17, having a bottom – see for example figures 1-4, the tracer platform being positioned inside the shotgun shell to fill the bore between the shot holder and the propellant – see figure 1, the tracer platform having a closed nose – at 9 or 17 or 20 and a bottom – see figures 1-5, the tracer element filling a coaxial cavity having a lower end at the bottom of the tracer platform – see for example figures 1-5, the bottom of the tracer platform and the bottom of the tracer element being shaped to leave a generally concave cavity which acts as a gas seal upon ignition of the propellant – see for example figures 1-4.

Referring to claims 25-26, Barrows discloses the tracer element – at 10 or 17, is made inseparable from the ballistic tracer platform by means selected from gluing, interference fitting

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and injection molding – see for example figures 1-5 where the tracer platform is attached to the tracer platform via interference fitting.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrows as applied to claims 2 or 13 above, and further in view of U.S. Patent No. 6,694,887 to Diller. Barrows does not disclose the housing of the tracer element contains a fire-suppressing agent. Diller does disclose the housing of the tracer element – at 26, contains a fire-suppressing agent – see for example column 8 lines 25-32. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Barrows and add the housing containing a fire-suppressing agent of Diller, so as to allow for the tracer element to not be consumed during the burning of the propellant.

Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrows as applied to claims 1 or 13 above, and further in view of U.S. Patent No. 3,262,390 to Cowles et al. Barrows does not disclose the tracer platform has a ballistic coefficient equivalent to a shot pellet's ballistic coefficient. Cowles et al. does disclose the tracer platform – at 11-12, has a ballistic coefficient equivalent to a shot pellet's – at 15, ballistic platform – see for example

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column 3 lines 49-63. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Barrows and add the tracer platform and shot having the same ballistic coefficient of Cowles et al., so as to allow for the tracer platform to accurately follow the path of the shot pellets upon ignition of the propellant in the shell.

Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrows as modified by Cowles et al. as applied to claims 5 or 17 above, and further in view of Diller. Barrows as modified by Cowles et al. does not disclose the tracer platform is made from one or more materials selected from the group of aluminum, brass, lead, neoprene, nylon, polyethylene, polyurethane, rubber, steel, Teflon, and titanium. Diller does disclose the tracer platform – at 26, is made of plastics, metals and rubber – see for example column 8 lines 25-33. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Barrows et al. as modified by Cowles et al. and add the tracer platform made of plastics, metals or rubber of Diller, so as to allow for the tracer platform to be durable.

Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrows as applied to claims 1 or 13 above, and further in view of U.S. Patent No. 4,841,866 to Miesner. Barrows does not disclose the tracer platform has a diameter in the range of 0.2 inches to 1.25 inches. Miesner does disclose the tracer platform – at 16, has a diameter in the range of 0.2 inches and 1.25 inches – see for example column 4 lines 31-40. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Barrows and add the tracer platform having a diameter in the range of 0.2 inches and 1.25 inches of Miesner, so as to allow for the tracer platform to ballistically match the shot pellets.

Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrows as applied to claims 1 or 13 above, and further in view of FR Patent No. 2598213. Barrows does not disclose the tracer platform has formed therein symmetrical cavities for holding weights for adjustment of the tracer platform's weight and flight characteristics. The French patent does disclose the tracer platform – at 6, has formed therein symmetrical cavities – see at either end of 6 in figure 5, for holding weights – at 5, for adjustment of the tracer platform's weight and flight characteristics – see for example figure 5. Therefore it would have been obvious to one of ordinary skill in the art to take the device of Barrows and add the multiple weights of the French patent, so as to allow for the weight of the tracer platform to correspond to the weight of the shot pellets.

Response to Arguments

4. Regarding claims 1-2, 4, 8, 10-14, 16, 20 and 22-26, the Barrows reference US 1457337 discloses the bottom of the tracer platform and the tracer element having a generally concave cavity which acts as a gas seal upon ignition of the propellant as seen – at the tracer platform 9,13 or 9a,17 and a the tracer element 10 or 17 as seen in figures 3 and 4 where the bottom of the tracer elements – at 10 and 17 are shown as being generally concave and the bottom of the tracer platforms – at 9 proximate 15 in figure 3 and – at 18 in figure 4 are generally concave. Further, these concave portions help seal the tracer platform and element from gas upon initial ignition of the propellant – at 5 in that at first ignition of the propellant – at 5 there is no gas in the tracer platform and tracer element. Further, the Barrows reference discloses the tracer platform – at 9,13 or 9a,17 holds and carries the tracer element – at 10 or 17 as seen in figures 3 and 4. The

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elements – at 10 or 17 are deemed tracer elements in that they are part of the tracer element of the device of Barrows. Further, the Barrows reference discloses the tracer platform – at 9,13 or 9a,17, is held in the bore – at the interior cavity of the shell – at 1, and fills the space in the bore – at the interior of item 1 – between the shot holder – at the combination of the upper cap of item 1 and item 8 as seen in figure 1 and the propellant – at 5 as seen in figure 1.

Regarding claims 3, 5-7, 15 and 17-19 applicant relies upon the arguments to claims 1 and 13 and therefore see the response to these arguments above in this paragraph of this office action.

Regarding claims 9 and 21, both the Barrows reference and the French patent FR 2598213 are shotgun shells and therefore have similar structure and function and therefore it is deemed that these devices can be combined given the motivation to combine found above in paragraph 3 of this office action.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

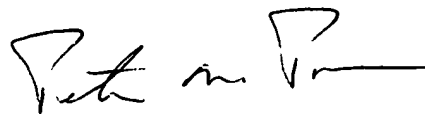
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Parsley whose telephone number is (571) 272-6890. The examiner can normally be reached on Monday-Friday from 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Parsley
Patent Examiner
Art Unit 3643



PETER M. POON
SUPERVISORY PATENT EXAMINER

4/20/06